View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Elsevier - Publisher Connector

A125.E1172
JACC March 9, 2010
Volume 55, issue 10A

MYOCARDIAL ISCHEMIA AND INFARCTION

QRS SCORE AT HOSPITAL DISCHARGE IS A STRONG PROGNOSTIC MARKER IN PATIENTS WITH ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION UNDERGOING PRIMARY PERCUTANEOUS CORONARY INTERVENTION

ACC Poster Contributions
Georgia World Congress Center, Hall B5
Tuesday, March 16, 2010, 9:30 a.m.-10:30 a.m.

Session Title: Unstable Ischemic Syndrome/Outcomes & Novel Risk Modifiers
Abstract Category: Unstable Ischemic Syndrome/Long-Term Outcome
Presentation Number: 1265-277

Authors: *Michael C. Tjandrawidjaja, Yuling Fu, Cynthia M. Westerhout, Galen S. Wagner, Christopher B. Granger, Paul W. Armstrong, University of Alberta, Edmonton, AB, Canada*

Background: The prognostic value of myocardial infarct size as estimated by QRS scoring among STEMI pts who undergo primary PCI and survive to hospital discharge is unclear.

Methods: The standard 32-point Selvester QRS score on the discharge ECG (each point ~3% LV mass) was calculated in 4,064 STEMI pts who underwent primary PCI and survived to discharge in the APEX-AMI trial. Multivariable Cox proportional hazards regression was used to evaluate the association between QRS score and 90-day death and the composite of death/CHF/shock.

Results: The table shows key baseline and angiographic characteristics, peak CK, and 90-day outcomes according to tertiles of discharge QRS score. Higher QRS scores were associated with male sex, worse Killip class, non-inferior MI location, greater extent of baseline ST-deviation, and longer times to reperfusion. Higher QRS scores were also associated with impaired culprit TIMI flow both pre- and post-PCI as well as more frequent multivessel disease. Adverse outcomes at 90 days occurred more often in pts with higher QRS scores. After multivariable adjustment, increasing QRS score remained associated with excess hazard of 90-day death (HR per QRS point: 1.09, 95% CI: 1.02-1.16; p=0.008) and 90-day death/shock/CHF (HR per QRS point: 1.09, 95% CI: 1.03-1.15; p=0.001).

Conclusions: Myocardial infarct size as estimated by QRS scoring at the time of discharge is an independent and prognostically relevant metric in contemporary STEMI pts undergoing primary PCI.

	QRS score at discharge (n=4064)			
	0-3	4-7	>=8	p
n	**1271**	**1575**	**1218**	
Age(y) median(IQR)	60 (51,70)	60 (51,69)	60 (52,68)	0.504
Female, %	27.5	22.0	19.3	<0.001
Heart rate(bpm) median(IQR)	72(61,84)	75(65,87)	76(66,87)	<0.001
Systolic BP (mmHg) median(IQR)	131 (116,150)	134 (119,150)	133 (118,150)	0.546
Killip >I,%	6.6	9.7	11.1	<0.001
Inferior MI (ECG), %	52.2	37.9	39.5	<0.001
ΣST-deviation(mm) median (IQR)	12(8.5, 16.0)	13.5(9.5, 18.5)	16(11, 22)	<0.001
Time from Sx to PCI (h) median (IQR)	3.16(2.37,4.28)	3.27(2.47,4.38)	3.3(2.63,4.59)	<0.001
Pre-PCI TIMI 3, %	18.7	10.0	6.3	<0.001
Post-PCI TIMI 3, %	92.8	92.1	89.0	0.002
Multi-vessel disease, %	35.6	39.6	39.8	0.048
Peak CK (U/L) median (IQR)	913(407, 1766)	1907(1048,3222)	2864(1590,4476)	<0.001
90-d death (post DC)	1.4	2.0	3.5	0.002
90-d death/CHF/shock (post DC), %	2.0	2.8	4.7	0.001